

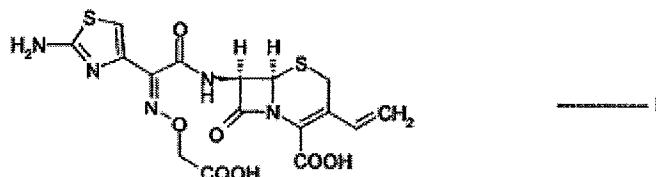
Application No. 10/598,877  
Amendment Dated 7/1/2009  
Reply to Office Action of 03/16/2009

### AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

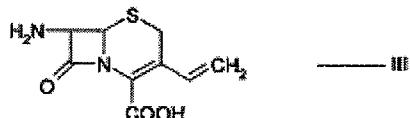
#### Listing of Claims:

1. (Original): A process for preparing cefixime of formula I:

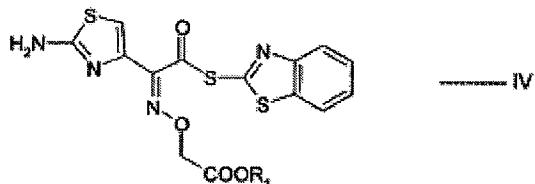


which comprises,

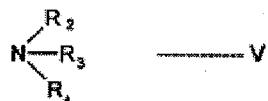
a) reacting 7-amino-3-vinyl-3-cephem-4-carboxylic acid of formula III:



with a thiazolyl acetic acid derivative of formula IV:

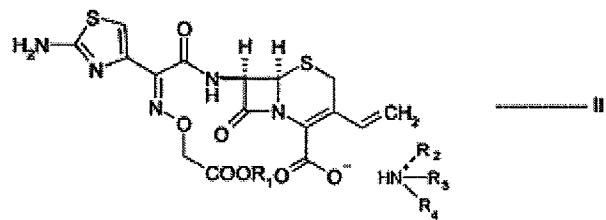


wherein R1 represents lower alkyl in a mixture of water and non-protic water miscible solvent in the presence of a base of formula V:



wherein R2, R3 and R4 independently of each other represents hydrogen, alkyl, cycloalkyl, alkylaryl, aryl or aralkyl to obtain a reaction mass comprising the compound of formula II:

Application No. 10/598,877  
Amendment Dated 7/1/2009  
Reply to Office Action of 03/16/2009



wherein R1, R2, R3 and R4 are as defined above;

- b) extracting the reaction mass of step (a) with ethyl acetate or methylene dichloride and separating the aqueous layer;
- c) hydrolyzing the salt of formula II present in the separated aqueous layer using an aqueous alkali metal hydroxide solution at about 0 - 15°C;
- d) adding an acid immediately after completion of hydrolysis reaction to adjust the pH to about 4.5 to 8.0; and
- e) crystallizing cefixime of formula I by adjusting the pH of the resulting solution of step(d) to about 2.0 to 3.5 with an acid and cooling if required.

2. (Original): The process according to claim 1, wherein the reaction in step (a) is carried out at below about 15°C.

3. (Original): The process according to claim 2, wherein the reaction is carried out at about 0 - 10°C.

4. (Original): The process according to claim 1, wherein the non-protic water miscible solvent is selected from tetrahydrofuran, acetone, dimethylsulfoxide and a mixture thereof.

5. (Original): The process according to claim 4, wherein the non-protic water miscible solvent is tetrahydrofuran.

Application No. 10/598,877  
Amendment Dated 7/1/2009  
Reply to Office Action of 03/16/2009

6. (Original): The process according to claim 1, wherein R2, R3 and R4 of formula V independently of each other represent hydrogen, alkyl or cycloalkyl.
7. (Original): The process according to claim 1, wherein the base is selected from triethylamine, trimethylamine, tributylamine and n-butylamine.
8. (Original): The process according to claim 1, wherein the quantity of the base of formula V used is at least about 1 mole per mole of compound of formula III.
9. (Original): The process according to claim 8, wherein the quantity of the base of formula V used is about 1 to 1.4 moles per mole of compound of formula III.
10. (Original): The process according to claim 1, wherein the solvent used in step (b) is ethyl acetate.
11. (Original): The process according to claim 1, wherein the hydrolysis reaction in step (c) is carried out at about 0 - 10°C.
12. (Original): The process according to claim 1, wherein the alkali metal hydroxide is sodium hydroxide or potassium hydroxide.
13. (Original): The process according to claim 1, wherein the quantity of alkali metal hydroxide is at least about 2 moles per mole of the compound of formula III.
14. (Original): The process according to claim 13, wherein the quantity of alkali metal hydroxide is about 2.5 to 4.0 moles per mole of the compound of formula III.
15. (Original): The process according to claim 14, wherein the quantity of alkali metal hydroxide is about 2.8 to 3.5 moles per mole of the compound of formula III.

Application No. 10/598,877  
Amendment Dated 7/1/2009  
Reply to Office Action of 03/16/2009

16. (Original): The process according to claim 1, wherein the pH of the reaction mass in step (d) is adjusted to about 4.5 to 6.0 with an acid.

17. (Original): The process according to claim 1, wherein the acid used in step (d) is selected from aqueous hydrochloric acid, aqueous sulfuric acid and aqueous phosphoric acid.

18. (Original): The process according to claim 17, wherein the acid is aqueous hydrochloric acid.

19. (Original): The process according to claim 1, wherein the acid in step (e) is selected from aqueous hydrochloric acid and aqueous sulfuric acid.

20. (Original): The process according to claim 19, wherein the acid is aqueous hydrochloric acid.

21. (Currently Amended): The process according to claim 1, wherein the cefixime crystallized in step (e) is as a cefixime trihydrate of formula Ia:

